MITSUBISHI ELECTRIC

Air-conditioner Control System

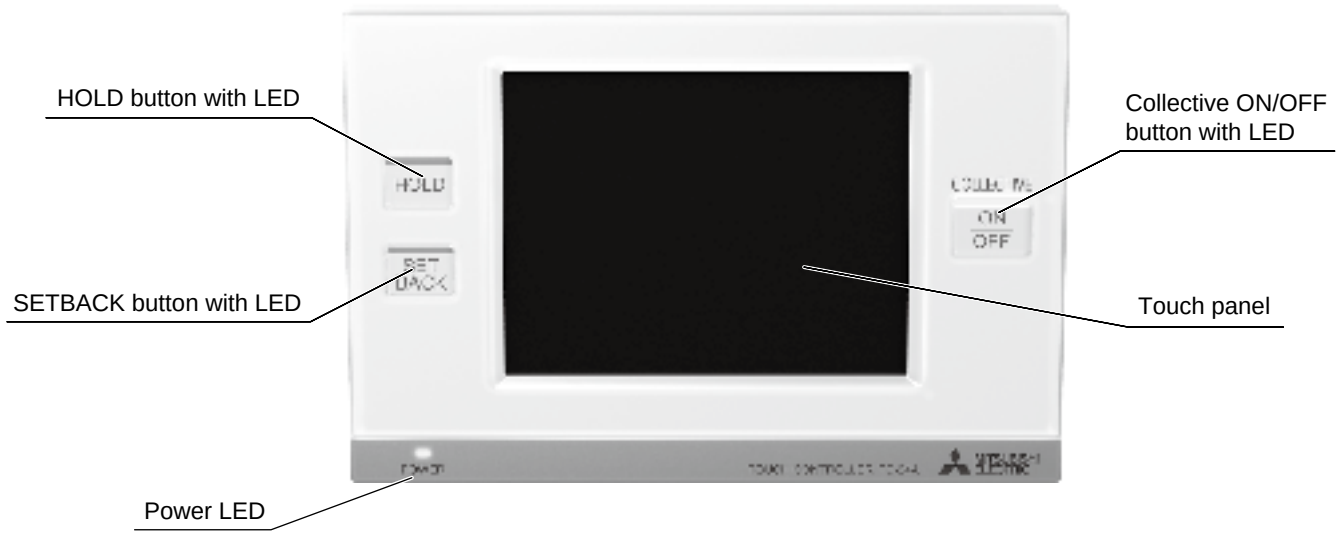
Touch Controller TC-24A

Initial Setting Manual

For distribution to dealers and contractors only

This Initial Setting Manual contains information about the settings to be made at the time of installation. Please read the instructions carefully and make the settings accordingly. Refer to the Installation Manual for how to install the TC-24A Touch Controller, and refer to the air conditioning unit installation manuals for how to connect the controller cable to the air conditioning units, or how to install the air conditioning units. Please remember to give all manuals to the end users after installation is complete.

1 TC-24A Touch Controller

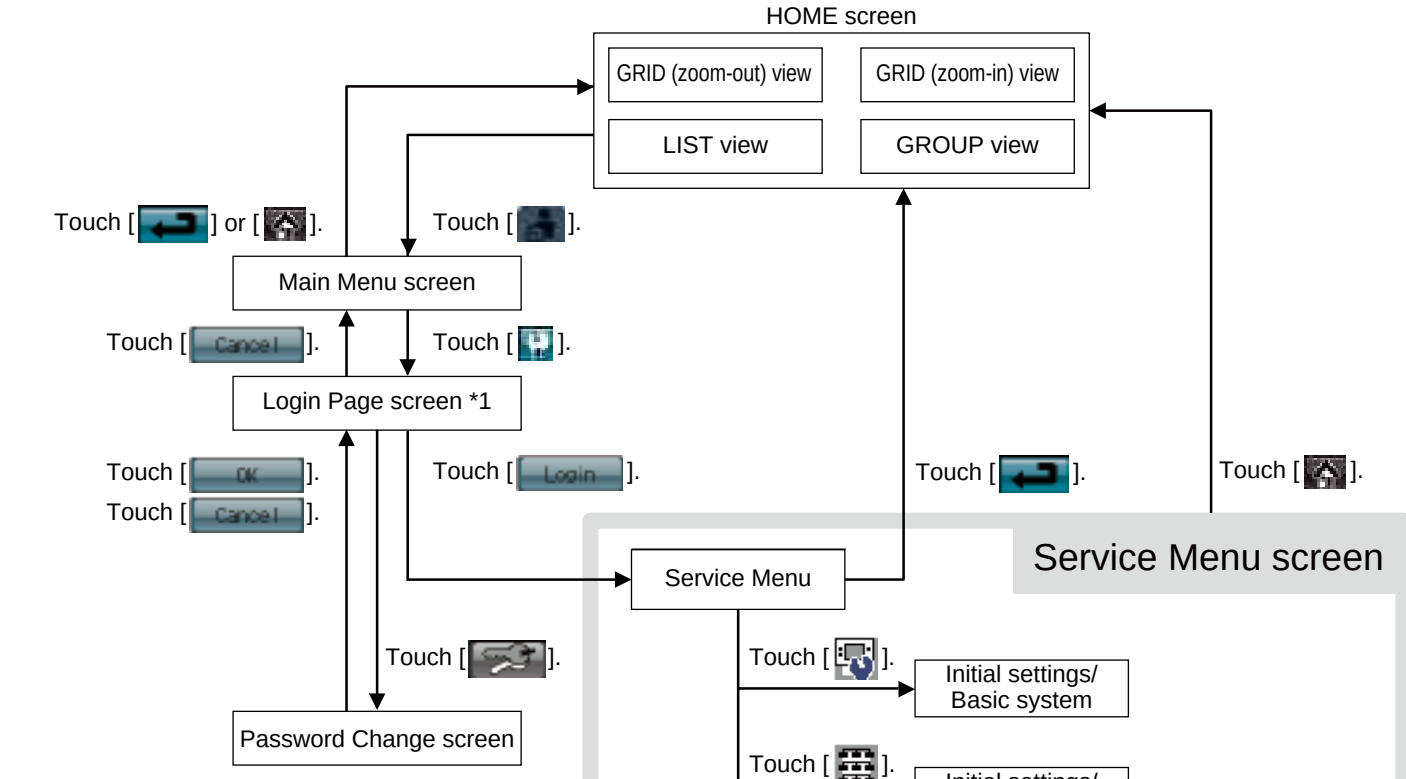


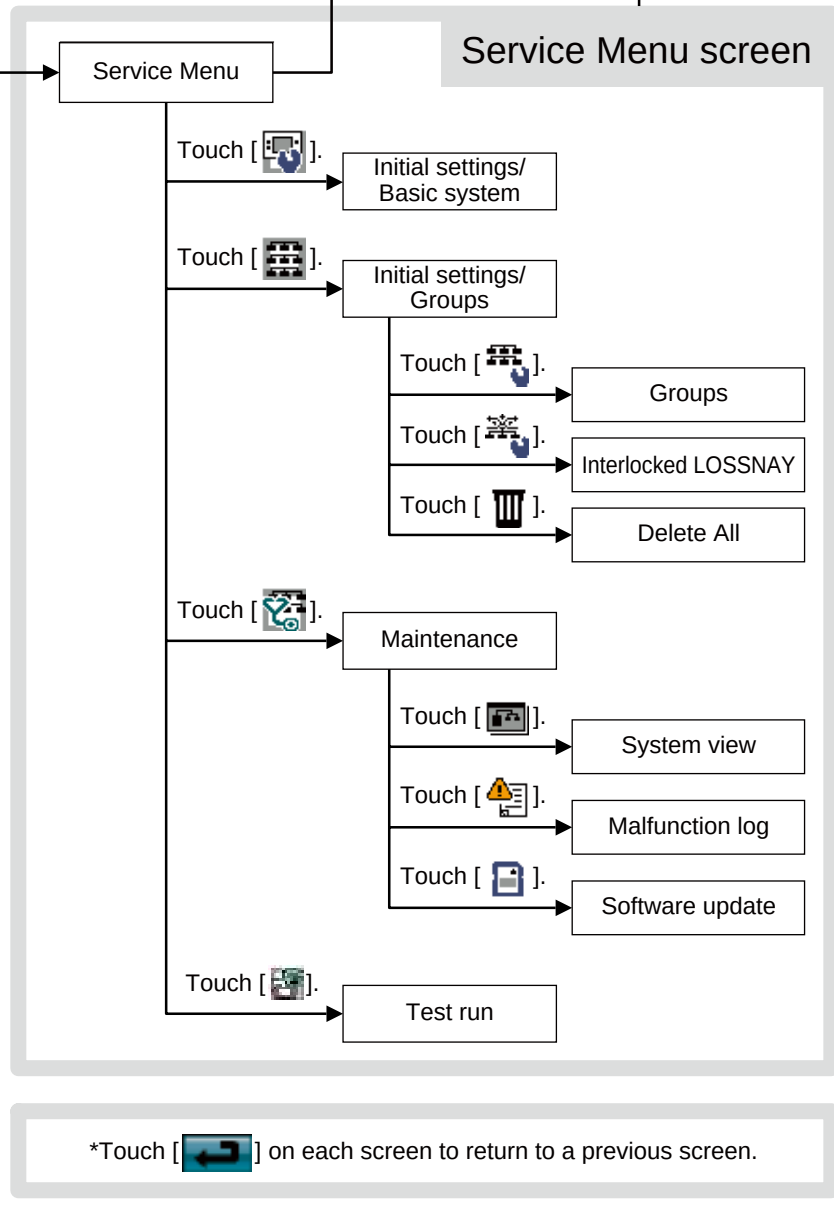
List of functions available under the "Service menu"

Screen	Setting	Function	Page
Initial Settings Basic System	M-NET address	Sets the M-NET address for the TC-24A.	4
	Remote controller access	Selects the type of controllers to prohibit access* from (remote controllers only or both remote controllers and system controllers). * Access to ON/OFF, Mode, Set Temp, and Filter Reset.	4
	External input mode	Selects the external input mode.	4
	Filter sign	Displays or suppresses the Filter sign on the HOME screen.	4
	Dry mode	Includes or excludes Dry mode as an option for the operation mode.	4
	Set temperature range (Schedule)	Selects the settable temperature range: Standard: 67°F(19°C) to 83°F(28°C); Low: 46°F(8°C) to 87°F(30°C); Manual: Settable to any arbitrary range between 46°F(8°C) and 87°F(30°C).	4
	Time notification	Sends or does not send the clock synchronization signal once a day to the controllers and units.	5
Initial Settings Groups	Groups	Makes the group settings for the indoor units, LOSSNAY units, DIDO controllers (PAC-YG66DCA), remote controllers, and sub-system controllers.	5
	Interlocked operation	Enters the interlock settings between indoor and LOSSNAY units.	6
	Batch deletion	Deletes all group and interlock settings collectively.	6
Maintenance	System view	Displays the information about the indoor units connected to each outdoor unit.	7
	Malfunction log	Stores the latest errors. (up to 50)	8
	Software update	Updates software.	8
Test run	Test run	Runs a test on the connected air conditioning units.	7

2 TC-24A Screen Configurations

(1) Screen sequence and Service menu configuration





Icon	Button name
	Main Menu
	Service Menu
	Password Change
	Back
	HOME
Cancel	Cancel
Login	Login
OK	OK
	Initial Settings/Basic system
	Initial Settings/Groups
	Maintenance
	Test run
	Groups
	Interlocked LOSSNAY
	Delete All
	System view
	Malfunction Log
	Software Update

*Touch [ ] on each screen to return to a previous screen.

*1 A password is required to access the Service menu.

- The initial Service password is “9999.” Change the password as necessary to prevent unauthorized access.
- Make sure the password is available to the maintenance and other necessary personnel.
- The password can be set to an arbitrary number between four and eight digits.
- If you forget your password, log in with the master password.
  Master password: 105638
- The same master password is used to log in to specific screens under the “Main Menu” and the “Service Menu.”

3 Initial Settings

[Notes on using the TC-24A with the AG-150A controllers*]

In addition to making the group and interlock settings on the TC-24A, the same setting information must be entered on the AG-150A controllers. Also, enter the M-NET address for the TC-24A in the System Controller field on the Group Setting screen. Register the M-NET address of the AG-150A on the TC-24A's Group Setting screen.

When combining TC-24A with the AG-150A controllers, the Setback, Hold, and External Input Function settings should be made only on the TC-24A. If using the Hold function on the TC-24A, schedule settings should not be made on the AG-150A controllers. To prohibit the operation of local remote controllers, set the prohibition settings either from the TC-24A or AG-150A, but not both.

* AG-150A Controllers : AG-150A, GB-24A, GB-50A, G-50A

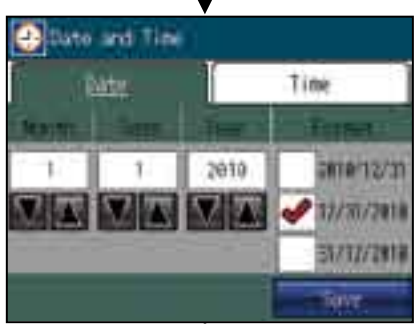
(1) Initial startup settings:

Before turning on the controller, first make sure that the controller, indoor units, and outdoor units have been installed properly according to the instructions detailed in the respective manuals.

Turn on the controller and the units.

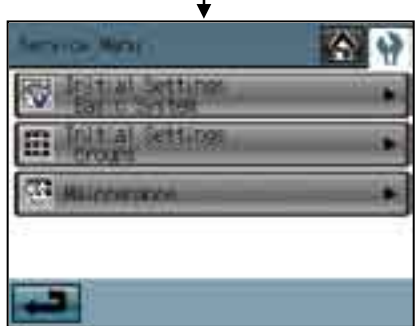
(a) The Language screen will appear

①Select the display language.
②Touch the button to select the language of your choice.
③Touch the OK button.



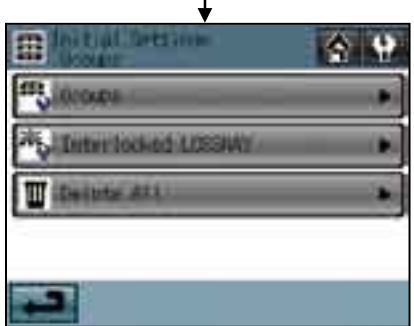
(b) The Date and Time screen will appear.

① Set the current date on the Date tab, and set the current time on the Time tab, using the ▼ and ▲ buttons to change the values.
② Click on the checkbox next to the date/time format of your choice.
③ Touch the Save button to save the settings.



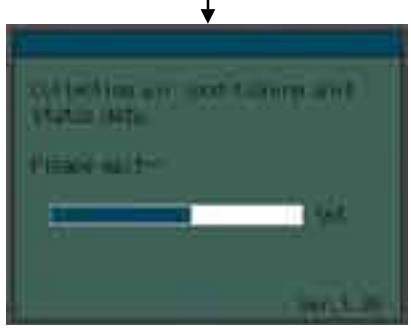
(c) The Service Menu screen will appear.

① Touch the Initial Settings/Basic System button to set the basic settings for the controller. (Refer to section 3(2)-1 for details.)
② When the settings have been chosen, touch the Initial Settings/Groups button.



(d) The Initial Settings/Groups screen will appear.

① Touch the Groups button to make the group settings. (Refer to 3(2)-2 for details.)
② Touch the Interlocked LOSSNAY button to make the interlocked operation settings. (Refer to 3(2)-3 for details.)
The initial startup settings are now complete.
③ Touch HOME button [ ] at the top right corner of the screen.
④ Touch the OK button on the popup screen to start the initialization process.



(e) The message (shown left) will appear on the screen, displaying the initialization progress. When initialization is complete, the screen will automatically return to the HOME screen.
(Initialization will take up to five minutes.)

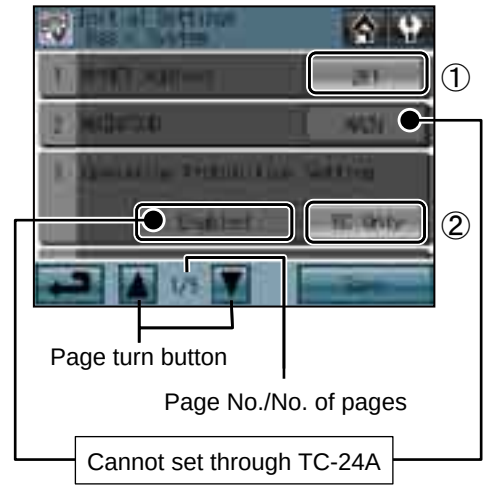
* To change settings later, perform a test run, or verify the maintenance information

① Touch MAIN MENU button [ ] on the HOME screen.
② Touch SERVICE MENU button [ ] on the Main Menu screen.
③ Enter the password to log on to the Service Menu screen.
(Refer to Chapters 3, 4, and 5.)

(2) Other Initial Settings

(2)-1. Basic controller setting

Touch Initial Settings/Basic System button [ ] on the Service menu screen to access the Initial Settings/Basic System screen.
Touch Page turn button [ ][ ] to turn the pages, and follow the directions below to make the settings for each group.



M-NET Address

1) Touch the M-NET Address button (labeled ① in the figure), and set the TC-24A Controller address on the screen that pops up.
   - The address can be set to 000 or to a value between 201 and 250 (the factory setting is 201).

Remote Controller Access

1) Touch the Remote Controller Access setting button (labeled ② in the figure) to switch between “SC/RC” and “RC only.”
   - Select “SC/RC” to prohibit access* from both the system controllers and remote controllers, and select “RC only” to prohibit access from only the remote controllers.

   * Access to ON/OFF, Mode, Set Temp, and Filter Reset.

External Input Mode

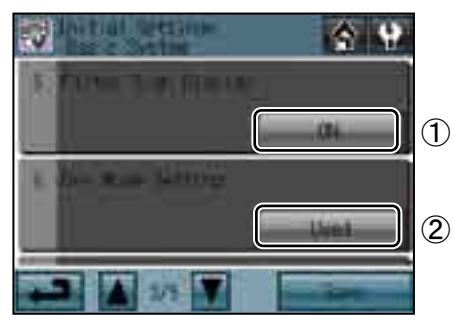
1) Press the External Input setting button (labeled ① in the figure) to select between “Not used”,“Emergency Stop (Level signal),” “ON/OFF (Level signal),” and “ON/OFF/Prohibit/Permit (Pulse signal).”
   * Refer to the Installation Manual for detailed information on how to connect the TC-24A to external devices.

Filter Sign Display

1) Press the Filter Sign Display button (labeled ① in the figure) to switch between ON and OFF.
   - Setting this item to OFF will remove the Filter Sign from the HOME screen display.
     This item can be set to OFF if there is no need for the sign to appear on the HOME screen; for example, in cases where filters are regularly changed regardless of the filter sign status.

Dry Mode

1) Press the Dry Mode Setting button (labeled ② in the figure) to switch between "Used" and “Not Used.”
   - If this item is set to “Not Used,” the Dry mode will be unavailable for selection.



Set Temperature Range (Schedule)

Set the temperature range that is available from the Set Schedule screen.

1) Touch the Set Temperature Range button (labeled ① in the figure) to switch between Standard, Low, and Manual.
   The temperature set range for each option is shown below:
   Standard : 67ºF(19ºC) to 83ºF(28ºC)
   Low : 46ºF(8ºC) to 87ºF(30ºC)
   Manual : Can be set to any arbitrary range between 46ºF(8ºC) and 87ºF(30ºC)
2) When “Manual” is selected, set the lower and upper temperature limits using the up and down arrows (labeled ② in the figure).

Clock Setting Signal

1) Touch the Clock Setting Signal button (labeled ① in the figure) to send or not send the clock synchronization signals to other controllers and units.
   - If the Clock Setting Signal is set to "ON," signals to synchronize the current time will periodically be sent to all system controllers and remote controllers that have a built-in clock function.
   * MA remote controllers that are connected to Mr. SLIM® units will not synchronize the clock and date. Also, the clock and date synchronization may not operate on certain CITY MULTI units.

Saving the Settings

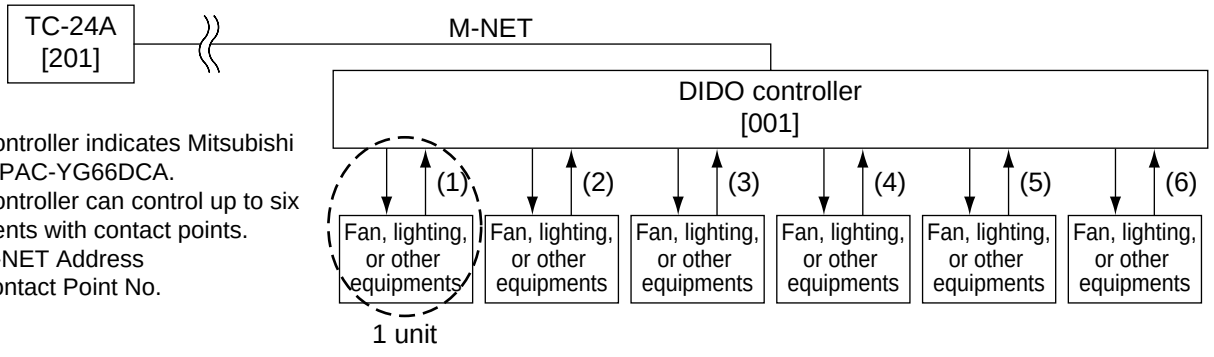
1) Touch the Save button to save the settings.

(2)-2. Group Settings

Enter the group settings on the Groups screen (air conditioning units, general equipment (and their respective group names) that are connected to TC-24A). Touch Initial Settings/Groups button [ ] on the Service Menu screen, and then touch Groups button [ ] on the Initial Settings/Groups screen to access the Groups screen. The DIDO controller (PAC-YG66DCA) by Mitsubishi Electric is required to control general equipments.

* General equipments: Refer to the types of equipments such as fans and lighting fixtures that are connected to the contacts. Each contact of general equipment counts as one unit, and up to 24 units (indoor units and LOSSNAY units combined) or their equivalent can be connected to each TC-24A.

(Sample system)



* DIDO controller indicates Mitsubishi Electric PAC-YG66DCA.
  DIDO controller can control up to six equipments with contact points.
  [ ] : M-NET Address
  ( ) : Contact Point No.

Up to 16 units can be assigned to each group. Indoor units, LOSSNAY units, and general equipment cannot be combined in one group. General equipment groups cannot include remote controller or system controllers. Touch Page turn button [ ][ ] to turn the pages, and follow the directions below to make the settings for each group.

Group Name

1) Touch the Group Name Input button (labeled ① in the figure), and enter the group name in the screen. (up to 16 characters maximum)
2) The name of a group can be copied and pasted into another group name field.
   Access the name of the group to be copied using the arrow buttons, and touch the Copy button [ ].
   Access the page to paste the copied group name onto, and touch the Paste button [ ].

Group setting screen

Group Settings for air conditioning units

1) Touch the Model selection button (labeled ② in the figure) to access the Model Selection screen. Touch the Model selection button (labeled ⑥ in the figure) so that "Air Conditioners" or "LOSSNAY" appears on the screen.
2) Touch the Unit selection button (labeled ③ in the figure).On the popup window that appears, check the address of the units to be included.
3) To assign a remote controller to a group, check the address of controller on the popup window that appears when the Remote controller selection button (labeled ④ in the figure) is touched.
   * Up to two remote controllers can be assigned to each group. (Group settings do not need to be made for the MA remote controllers.)
4) To assign a system controller to a group, check the address of the controller on the popup window that appears when the System controller selection button (labeled ⑤ in the figure) is touched.
   * Up to four remote and system controllers combined can be assigned to each group.
5) After all the settings have been made, touch the Save button.

Model selection screen

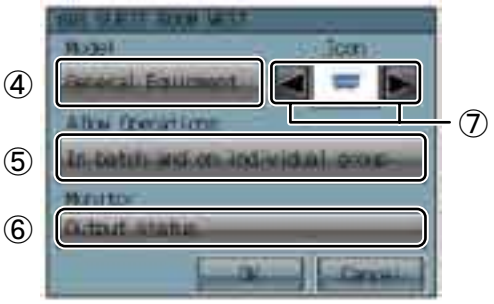
Group Settings for General Equipment

1) Touch the Model selection button (labeled ② in the figure) to access the Model selection screen.
   Touch the Model selection button (labeled ④ in the figure) a few times so that “General Equipment” appears.
2) To change the icons, touch the Icon Selection button (labeled ⑦ in the figure), and select the desired one.
3) Touch the General equipment operation setting button (labeled ⑤ in the figure) to allow or disallow (monitor only) the user to start/stop the connected equipment via the TC-24A.

In batch and on individual group	Units can be turned on or off either collectively or by group from the TC-24A.
On individual group	Only certain groups of units can be turned on or off from the TC-24A.
No operations (Monitor only)	Units cannot be turned on or off from the TC-24A.

4) Touch the General equipment display setting button (labeled ⑥ in the figure) and choose between the following ON/OFF status display options on the HOME screen: "Output status to the general equipment” or “Input status from the general equipment.”
5) Touch the Unit selection button (labeled ③ in the figure). On the popup window that appears, check the address and the contact number of the DIDO controller (PAC-YG66DCA) to which the general equipment is connected.
6) After all the settings have been made, touch the Save button on the Groups screen.

Group setting screen

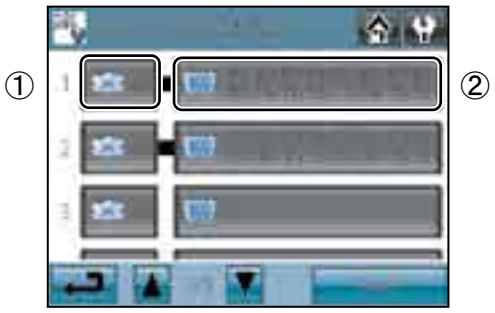


Model selection screen

(2)-3. Interlocked settings between indoor units and ventilation units (LOSSNAY and OA processing units)

To interlock the ON/OFF status of the ventilation units with the indoor units, make the settings through the “Interlocked LOSSNAY” screen.

* Touch the Initial Settings/Groups button [ ] on the Service Menu, and then touch the Interlocked LOSSNAY button [ ] on the Initial Settings/Groups screen to access the Interlocked LOSSNAY screen.



1) Touch the LOSSNAY button (labeled ① in the figure). On the popup window that appears, check the address of the ventilation units to be interlocked with the operation of the indoor units.
2) Touch the Interlocked indoor unit button (labeled ② in the figure). On the popup window that appears, check the address of the indoor units to be interlocked with the ventilation units.
   * Up to 16 indoor units can be assigned to each ventilation unit.
3) After all interlocked operation settings have been made, touch the Save button.

(2)-4. Batch deletion

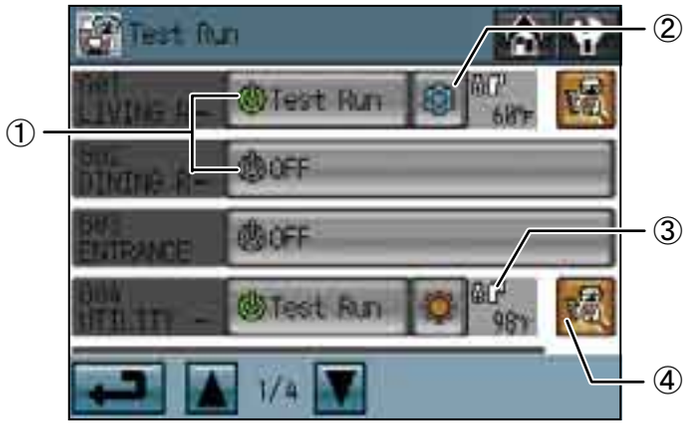
To delete all group and interlocked operation settings collectively, follow the procedure below.

1) Touch the Initial Settings/Groups button [ ] on the Service Menu screen, then touch the Delete All button [ ] on the Initial Settings/Groups screen. A popup message “Do you want to delete all group settings and interlocked LOSSNAY settings?” will appear.
2) Touch the OK button to delete group and interlock.

4 Test Run

To run a test, follow the procedure below.
(1) Touch the Test Run button on the Service Menu screen to access the Test Run screen.
(2) Touch the OFF(ON) button (labeled ① in the figure) to run a test on the group.

Test Run screen



Button		Function
①	OFF(ON)/Test Run	Touch the OFF(ON) button to start a test run. Touch the Test Run button to stop the test run. (These buttons are active only for the units that support the test run function.)
②	Operation mode	Touch this button to switch between the Cooling mode and the Heating mode.
③	Pipe temperature	The pipe temperature of the indoor unit with the lowest address in a given group will appear.
④	Advanced settings	Touch this button for advanced settings.

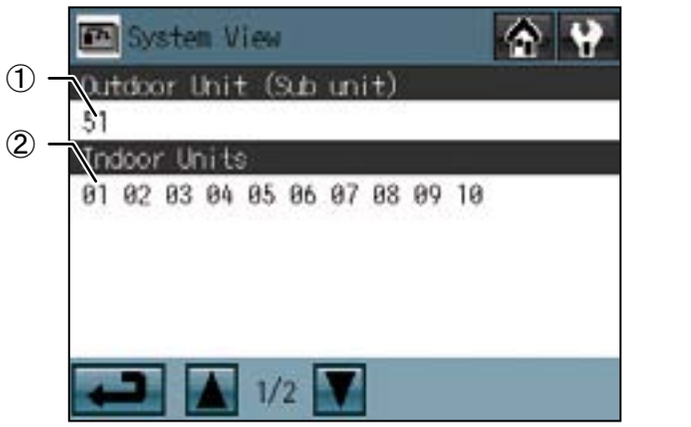
Test Run Advanced setting screen

Display		Function
A	Indoor temperature	Indoor air temperature will appear.
B	Unit address up/down arrows	Use the up/down arrows to select the indoor unit whose pipe temperature you want to check.
C	Pipe temperature	The pipe temperature of the indoor unit whose address is shown on the screen will appear.
D	Remaining time	The remaining time for the test run will appear.

(3) During the test run, verify that air conditioned air is blowing out of the supply air outlet.
(4) After checking for normal operation of each unit, stop the units through TC-24A or the local remote controllers.
* Refer to the indoor unit installation manual for the detailed information about test run.

5 Maintenance

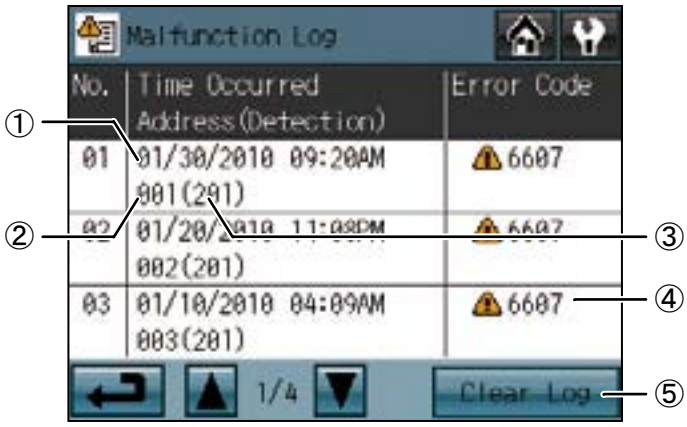
Touch the Maintenance button [ ] on the Service Menu screen to access the Maintenance screen.
(1) To view the System information
Touch [System View] button on the Maintenance screen to view a list of equipments connected to the same refrigerant system.
* Only the ones whose startup procedures have been successfully completed will appear in the list.



		Display content
①	Outdoor unit address	The addresses of the outdoor units that are connected to TC-24A will appear. (The number in the parentheses indicates the address of the Sub unit.)
②	Indoor unit address	The addresses of the indoor units that are connected to given outdoor units will appear.

(2) To view the Malfunction Log

Touch the Malfunction Log button on the Maintenance screen to view. The latest 50 malfunctions will appear three at a time.



Display content		
①	Occurrence date	The date on which the error occurred.
②	Error source unit address	The address of the unit with the error.
③	Error detection unit address	The address of the unit that detected the error.
④	Error code	The error code that corresponds to the error.
⑤	Clear Log button	Use this button to clear all records on the Malfunction Log.

* Refer to the Instruction Book on how to make the settings not mentioned in this manual (e.g., schedule settings and button lock settings).

To Update The Software (as necessary)

1) Touch the Software Update button [ ] on the Maintenance Menu.
2) Following the instructions on the screen, insert the SD memory card with the update program into the SD slot, and then touch the OK button.
   * If a message [Unable to read the SD card] appears, check to make sure that the SD memory card is properly inserted.
   * If a message [Update file was not found] appears, check to make sure the SD memory card contains the updated program.
3) Following the instructions on the screen, remove the cover on the controller by unscrewing the screws at the bottom, turn DIP switch 4 to ON, and then touch the OK button.
   * If the message [The DIP switch 4 is set to OFF.] appears, check to make sure that the DIP switch 4 is turned to ON. The DIP switch is located at the left bottom of the controller under the cover.
4) Touch the OK button on the confirmation screen.
5) Touch the OK button on the popup message to begin the update process.

> **Note:** Software updates will take approximately five minutes. Do not remove the SD card or switch off the power while an update is in progress. If the power is turned off during the update process, the program may be lost and the system will not be able to start.

6) The lit LEDs on the three buttons (HOLD, SETBACK, and Collective ON/OFF) will indicate a successful completion of the update. While update is in progress, the LEDs on the HOLD and SETBACK buttons will alternately blink.
   * Consult your dealer if the update is not completed in 10 minutes.
7) After the update has been completed, turn the DIP switch 4 to OFF to restart the TC-24A. When the initialization screen appears, check that the software version that appears at the bottom right corner is correct. If it shows the old version, the update failed. Try updating the software again.
   * Only 1 GB and 2 GB SD memory cards by SanDisk are supported.
   * SanDisk is a registered trademark of SanDisk Corporation in the United States and other countries.

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